

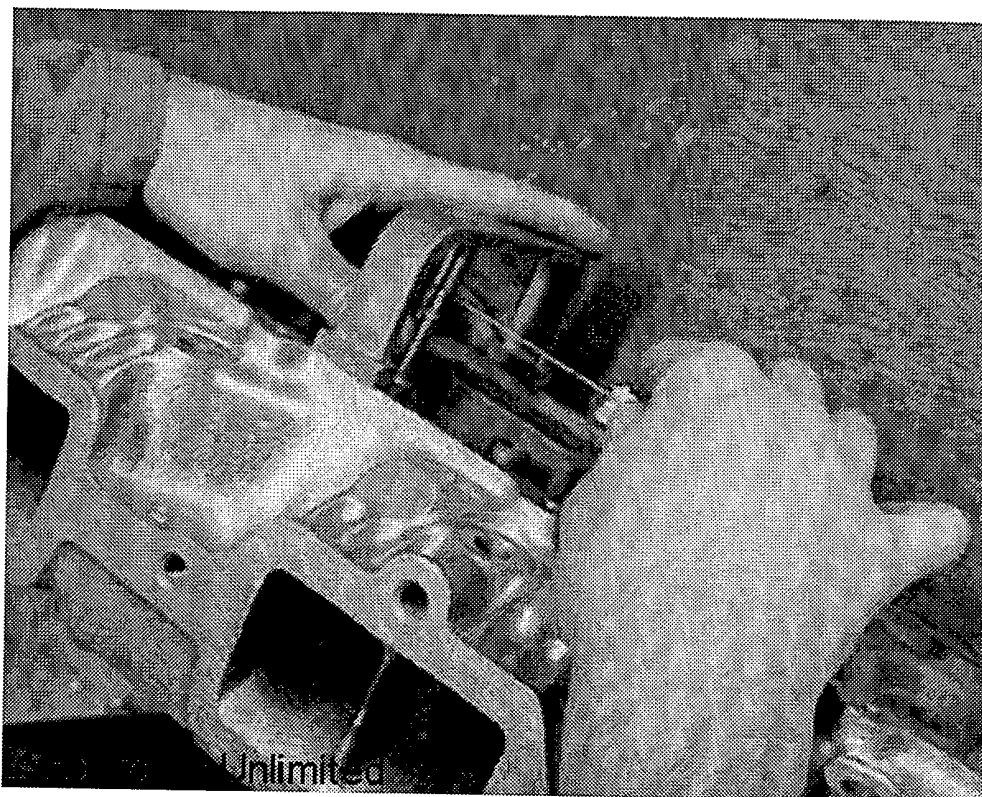


SETTING VALVE STEM HEIGHTS

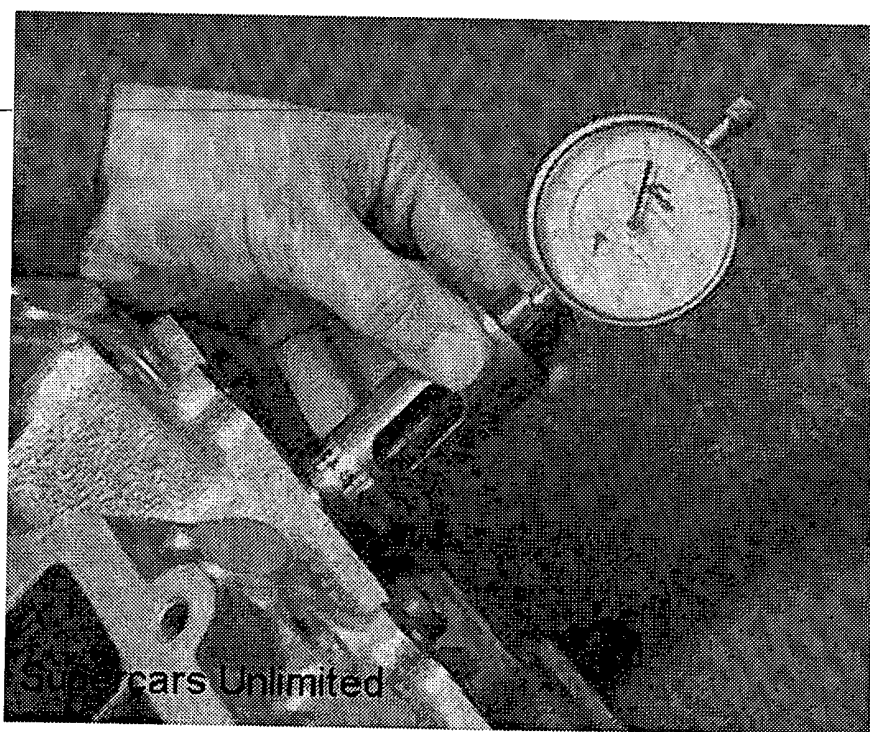
By Greg Rollin

Setting the stem heights is a standard procedure with a correct valve job, but surprisingly enough, is quite frequently overlooked by many machine shops. It is important that the valve stem heights are set or at least equalized. As this will have an effect on lifter preload, rocker arm geometry, valve lift and valve train longevity. This is a specially important procedure when dealing with stock type non adjustable rocker arms.

Stem heights are increased when the valve seat is ground and when the face of the valve is surfaced. As this puts the tip of the valve stem higher in the head. This will also affect the valve spring installed height, but more on that in another article. The additional stem height must be compensated for by grinding the tip of the valve. You can check for proper valve stem heights by either of the methods shown below.

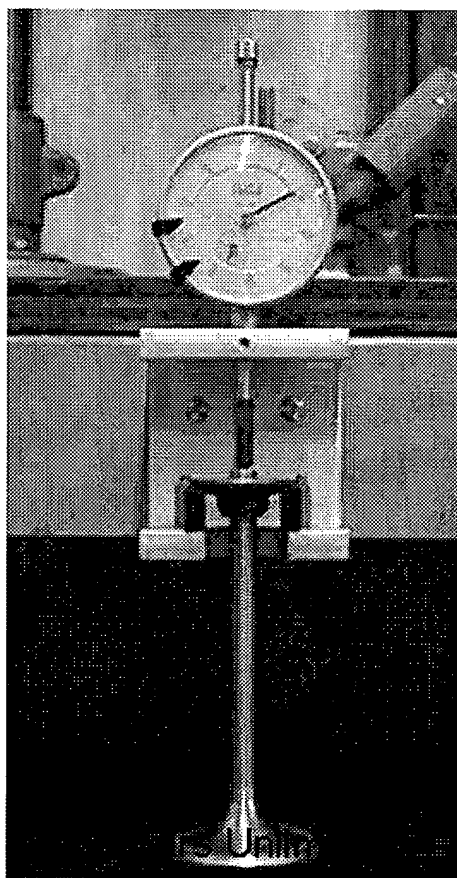


When using a factory tool (#BT6428), the minimum clearance between the valve stem tip and the tool must be .035" for 66-67 330's and 68-72 350's, .005" for 66-72 400's and 455's.



When setting valve stem height with a dial indicator (above), the maximum height from the (stock) spring seat to the tip of the valve stem should be: 1.860" for 66-72 330-350

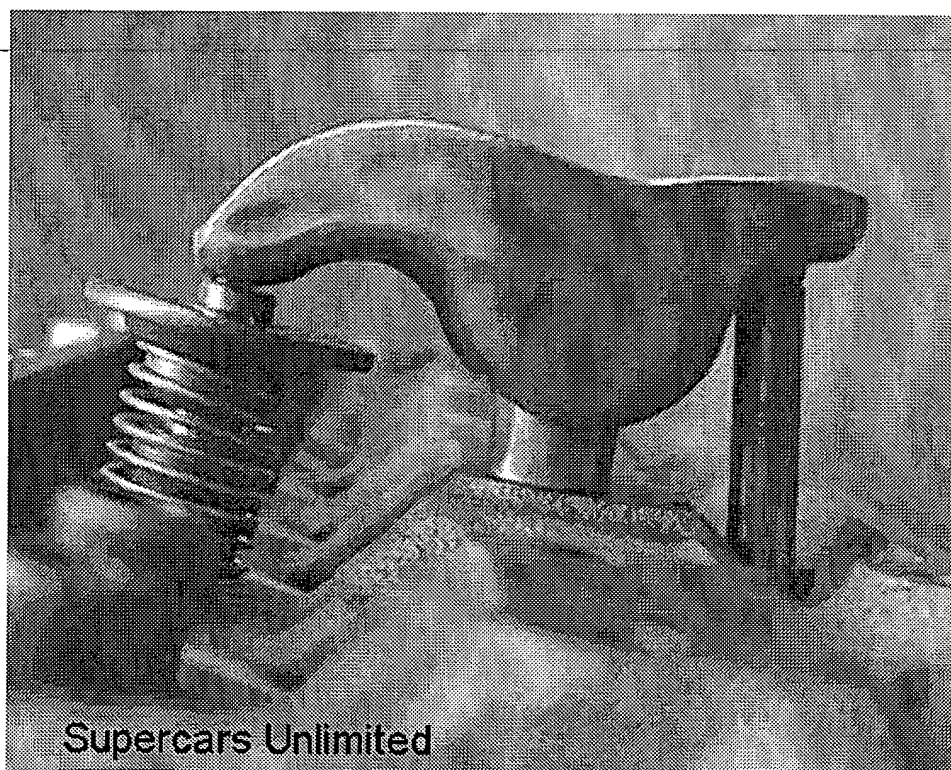
and 1.880" for 66-72 400-455.



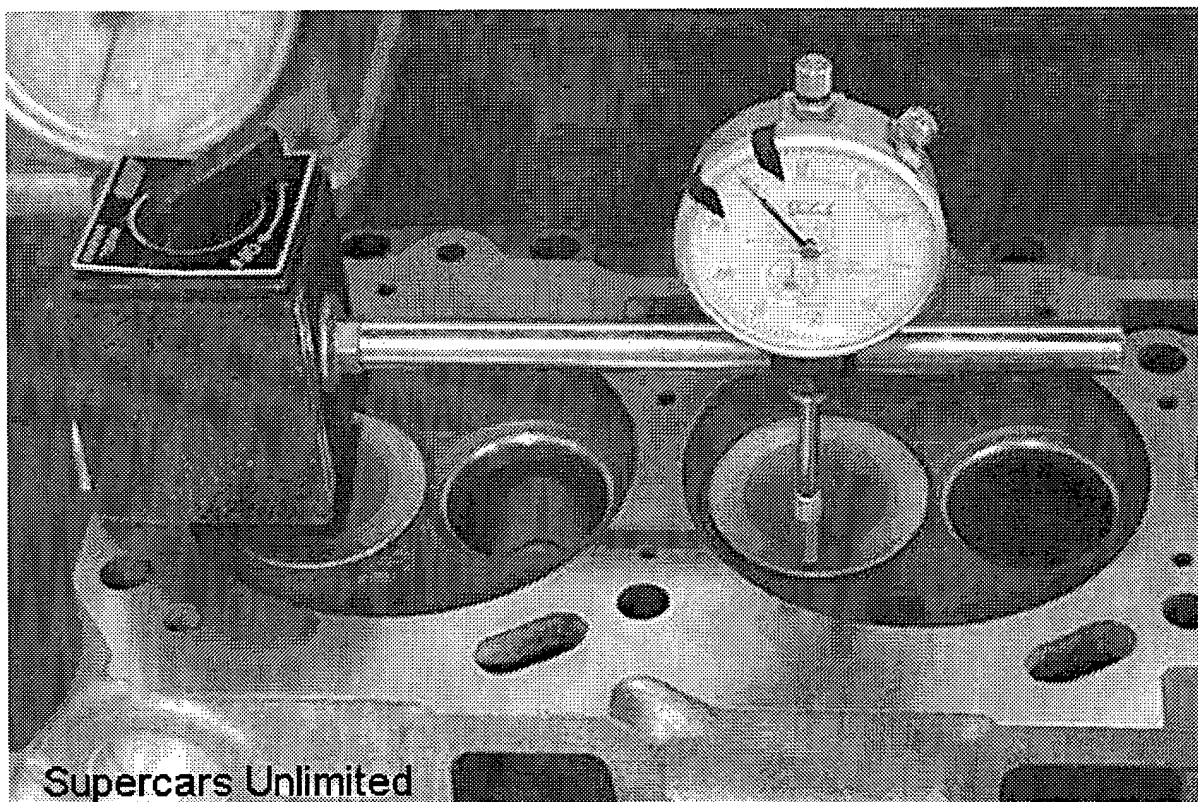
Caution, the stem tip must not be less than .005" taller than the retainer/rotator. If it is, the seat and/or valve has been ground too far. If a new valve does not correct the problem, a new seat will need to be installed to obtain proper stem height.



Valve stem height (as well as pushrod length, surfaced heads/blocks and cams with different base circle diameters) will effect rocker arm geometry. For proper geometry, the rocker arm contact pattern across the valve stem tip should travel an equal distance from the edge of the valve stem tip in the non lift position (above) as it does to the opposite edge of the valve stem tip in the full lift position (below). At half valve lift, the rocker arm contact with the valve stem tip should be in the center of the valve stem tip.



NOTE: Since some of you have wondered, the valve "spring" in the above photos is a test spring used for the purpose of checking setups.



As noted, valve stem height will be effected by the amount removed from the seat and face. In addition, by equalizing the valve depth on all cylinders, this will help keep the volume of the combustion chambers equal. Obviously, the deeper the valves are sunk, the more you will increase the combustion chamber volume.

We hope you have found this information helpful.

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